



THE FILTER PRESS

Newsletter of the Georgia Section of the American Chemical Society

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February 2009

Caves: Worlds within Worlds: an introduction to the Chemistry, Geology, and Ecology of Caves

John Marquart, Eastern Illinois University
February Meeting: Wednesday, February 11th

Cave science, or "speleology", offers an important means of learning about the earth's geological history from the inside out. Caves are the exotic inner-worlds within our more familiar surface-world, hence the title "Caves -- Worlds within the World". Caves can be aesthetically beautiful, challenging, and sometimes fearfully dangerous. They also constitute a valuable non-renewable resource that should be appreciated for their beauty and protected from damage or destruction. Even though hidden deep beneath our feet, they have considerable, but often overlooked, impact upon our lives and the welfare of the earth's resources and ecology. Professor Marquart has been exploring and studying caves throughout the U.S. for almost five decades. It is estimated that at least a quarter of the United States can be considered karst (cave) area. He will take you on a slide-show tour of caves from across the country, with particular attention to the chemistry and geology that created them and their unique characteristics. He will also include a discussion of caves in your area when appropriate. This presentation is designed for an audience of varied interests and backgrounds, technical or non-technical. It is interdisciplinary in content, combining chemistry with geology, hydrology, and earth history to show how and where caves are formed and why environmental concerns are particularly serious in karst regions.

Dr. John R. Marquart is a professor of chemistry at Eastern Illinois University in Charleston, IL (1978 - present). His area of research involves applications of analytical and physical chemistry to environmental problems. He is active in a wide variety of field-based conservation and restoration projects involving subterranean environments (e.g. caves, mines, and water hydrology). His work on these projects is in collaboration with several state, federal, and private organizations. His interest in caves dates from his early childhood, when his family took summer vacations from their home in southwestern Michigan. Michigan has few caves itself, thanks to the having been buried multiple times by glaciers, so he and his older brother looked forward to vacations to nearby Midwestern states that have a greater abundance of caves. They soon became fascinated with the excitement of exploring caves and learned to appreciate them for their natural beauty. From this beginning, his experience has broadened to exploration of caves across the United States and progressed from a sport to the science of caves, "speleology". His lectures illustrate the many outstanding features of caves and stress the importance of conservation of this delicate ecology. After receiving a B.S. in chemistry from the (continued on page 3)

Reservation deadline is 5PM, Friday, February 6th —see page three for all details.

Greening the Filter Press

The Executive Committee voted that beginning with the April 2009 Filter Press, and coincident with Chemists Celebrate Earth Day, the Filter Press will only be distributed electronically. If you do not have access to email, kindly provide the mailing address that you wish to be used to the editor, and a Local Section Volunteer will mail a copy to you. In addition, now's a good time to make sure that your preferred email address is up-to-date—send email updates to hernandez@gatech.edu.



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American Chemical Society--Georgia Section

Minority Affairs Committee

will host a networking reception
"Building A Path To Success"

Friday, February 27, 2009

from 5:00pm--8:00pm

Paschal's Restaurant

180B Northside Drive S.W.

Atlanta, GA 30313

R.S.V.P. (REQUIRED--before February 15th)

by email to: vlockhart@na.ko.com

From the 2009 Herty Medal Committee:

It is with great pleasure that Craig Hill from Emory University has been selected as this year's Herty Medalist. The program is scheduled for September.

It's local Science Fair time again!

Would you like to participate as a judge in a science fair this spring? So far, we have obtained information about three: The 2009 Fulton County Regional Science and Engineering Fair, the 2009 Gwinnett Middle School science fair, and the 2009 Georgia Science and Engineering Fair. Read on.

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February Meeting: Wednesday, February 11th

Caves: Worlds within Worlds

John Marquart
Eastern Illinois University

6:30 PM meet & mingle, cash bar
7:00 PM dinner served (family style)
7:45 PM meeting presentation

Location:

[Pung Mie Chinese Restaurant](#)
5145 Buford Hwy NE
Doraville, GA 30340-1123
770-936-0707

Menu: Family style dining.
Steamed & fried dumpling appetizer
Soup
Selection of six entrees
Fruit dessert

Cost for meal option: \$25 per person; \$15 for teachers, students and retirees. Payment should be made to the "Georgia Section ACS" and will be collected at the door. If you make a reservation and then don't attend, you will be charged for the meal, as we have to guarantee the number of meals.

RSVP for dinner reservations to David Gottfried by phone to 404-894-0479 or by email to david.gottfried@mirc.gatech.edu **by 5:00 pm on Friday, February 6th.**

It's local Science Fair time again

(continued from page 2)

Serving as a science fair judge is a rewarding experience that will take little of your valuable time but provide students the chance to interact with an experienced professional from their own field of interest and give them constructive feedback on their research. Experiences such as this are essential in their growth and development as future scientists, mathematicians, and engineers.

The Georgia Science and Engineering Fair (GSEF) is April 1-4, with judging usually on the Thursday. For the past several years, the Georgia Local Section of the American Chemical Society has provided a special award, so we will need 4-6 judges to assist in this selection. More details will be forthcoming in March.

Dr. Marquart biography (continued from page 1): University of Arizona and a commission in the U.S. Army through the ROTC program in 1955, he served for three years with the Army Chemical Corp. He later received M.S. and Ph.D. degrees from the University of Illinois at Urbana/Champaign in 1961 and 1963. He worked as a research chemist for Shell Development Co., Emeryville, CA (1963-1968). In 1968 he switched from industrial research to academic teaching and research, first at Mercer University in Macon, GA (1968-1978) and then at Eastern Illinois University (1978-present). He regularly teaches as a visiting professor at the University of Illinois in Urbana/Champaign. Since becoming an ACS tour speaker in 1995, Dr. Marquart has presented about 100 society sponsored lectures on cave science in about 40 of the U.S. states. When on these speaking tours, he enjoys sharing his knowledge and enthusiasm concerning caves with his hosts and all who attend his talks.

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